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Heping Huang

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EXAMINER

MARCETICH, ADAM M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,708	<b>Applicant(s)</b> HUANG ET AL.	
	<b>Examiner</b> Adam Marcetich	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). A certified copy of parent Application No. China 200420021636.6, filed on 06 April 2004 has been received.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger '809 et al. (US 20030150809) in view of Bomberger '776 et al. (US 20060000776).

5. Regarding claim 1, Bomberger '809 discloses an in-vitro blood plasma lipids filtering method, comprising the following steps:

separating blood plasma from collected blood (§ [0093], [0114] and Fig. 2, centrifuge 86 separating blood plasma);

controlling temperature and pressure of the blood plasma (§ [0115] and Fig. 2, sensors 96 controlling temperature and pressure);

passing the blood plasma to screening procedure for filtering (§ [0111], [0112], DTCs (drip through column) 44 and 46 removing lipids); and

feeding the blood plasma back to the blood after the filtering step (§ [0031], [0086], returning plasma to patient).

carrying out flushing (§ [0092], flushing HFC / hollow fiber contactor);

controlling temperature and pressure of the blood plasma (§ [0115] and Fig. 2, sensors 96 controlling temperature and pressure);

Bomberger '809 discloses the invention as substantially claimed, see above.

However,

Bomberger '809 discloses the invention substantially as claimed, including a step of carrying out flushing. See above. However, Bomberger '809 lacks a pre-filtered blood plasma bag and is silent regarding the specific use of saline solution as claimed [claim 1]. Bomberger '776 discloses a system and method for removing lipids from plasma (§ [0002], [0022], [0073], Fig. 2, system 10) further comprising:

separated blood plasma that enters a pre-filtered blood plasma bag (§ [0082], [0110], Fig. 2, fluid source 14 containing plasma);

carrying out flushing with saline solution (§ [0110], priming delipidation system 10 using a saline fluid stored within saline fluid source 21).

Bomberger '776 provides the advantage of storing a biological fluid under specifically required conditions (§ [0110] fluid source 14 storing fluids for any length of time depending upon the requirements, such as temperature, of the fluids). Regarding the step of flushing with plasma, Bomberger '776 provides the advantage of using an isotonic solution (§ [0110] saline preferable because it is isotonic with plasma). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 as discussed with the pre-filtered blood plasma bag and use of saline solution as taught by Bomberger '776 in order to store a fluid under specific conditions and use an isotonic solution.

6. Regarding claim 2, Bomberger '809 discloses a separating step comprising a stepwise separation process for separating the blood plasma at about 150-250 milliliters of blood plasma each time (§ [0174], plasma batch for treatment by solvent extraction typically about 250 milliliters). It is the Examiner's position that a volume of about 250 ml would have been produced previously by stepwise separation in order to produce a "batch."

7. Regarding claim 3, Bomberger '809 discloses an in-vitro blood plasma lipids screening procedure wherein blood plasma passes to the filtering device at a speed of 20-30 milliliters per minute (§ [0124], plasma flow rate between about 10-60 mL per minute).

8. Regarding claim 4, Bomberger '809 discloses the invention as substantially claimed, see above. Bomberger '809 discloses pressure sensors 146, 154 and 156 as discussed above for claim 14. However, Bomberger '809 is silent to the specific

pressure of the device being controlled to remain below 60 kPa. However this pressure is deemed a matter of design choice well within the general skill of the ordinary artisan, obtained through routine experimentation in determining optimum results. Thus, it would have been obvious to one of ordinary skill in the art to modify the system pressure as claimed as a mere design choice lacking any criticality of value as being merely preferable for the intended purpose of preventing a patient from being exposed to unsafe pressure levels. Where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

9. Regarding claim 5, Bomberger '809 discloses the invention as substantially claimed, see above. Bomberger '809 discloses sensors 96 for monitoring temperature as discussed for claim 15 above. However, Bomberger '809 is silent to the specific temperature of the system being controlled to remain below 38C. However this temperature is deemed a matter of design choice well within the general skill of the ordinary artisan, obtained through routine experimentation in determining optimum results. Thus, it would have been obvious to one of ordinary skill in the art to modify the system temperature as claimed as a mere design choice lacking any criticality of value as being merely preferable for the intended purpose of preventing blood from being

exposed to unsafe temperatures that would cause hemolysis. In other words, blood cells may be damaged by high temperatures, and limiting a system temperature prevents hemolysis. Where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger ‘809 et al. (US 20030150809) in view of Bomberger ‘776 et al. (US 20060000776), further in view of Matkovich et al. (US 5252222).

11. Regarding claim 6, Bomberger ‘809 discloses a filtering device comprising first film membrane which has filter aperture pore of about 0.3 to 0.65  $\mu\text{m}$  and comprising a lipid absorptive material (¶ [0101]-[0102] and Fig. 3, HFC 18 comprising hollow fibers 20 having pores 26 sized up to 300 nm, or 0.3  $\mu\text{m}$ ; overlapping claimed range of about 0.3 to 0.65  $\mu\text{m}$ ). Hollow fibers are substantially lipid absorptive, as indicated by their ability to allow lipids to diffuse through pores 26.

Bomberger ‘809 in view of Bomberger ‘776 discloses the invention as substantially claimed, see above. However, Bomberger ‘809 in view of Bomberger ‘776 lacks multi-layers of thin film membranes further comprising second and third films as

claimed [claim 6]. Matkovich discloses a filter for treating parenteral fluids (column 3, lines 16-19), further comprising:

a second film membrane having filter aperture pores of about 0.3 microns (column 8, lines 32-41 and column 7, lines 54-58, prefilter in examples 3 and 5 having pore rating of about 2  $\mu\text{m}$  which substantially approximates the claimed range of about 0.3  $\mu\text{m}$ ), and

a third film membrane having filter aperture pores of about 0.2 microns and comprising nylon as a base material (column 8, lines 32-41, hydrophilic nylon membrane with pore rating of about 0.65  $\mu\text{m}$ , which substantially approximates the claimed range of about 0.2  $\mu\text{m}$ ).

Matkovich provides the advantages of removing particulate matter and microorganisms from a lipid-containing liquid (column 2, lines 25-36 and 39-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 in view of Bomberger '776 as discussed with the second and third film membranes as taught by Matkovich in order to remove particulate matter or microorganisms.

The property of pore size is interpreted as a result-effective variable, subject to experimentation and testing. A result-effective variable is a parameter which achieves a recognized result. These results are obtained by the determination of optimum or workable ranges of said variable through routine experimentation. The property of pore size achieves separation of solid elements from a liquid through routine experimentation. For example, the pore size of ultrafiltration cartridges is adjusted or



manipulated based on which components of blood are desired to be separated. Filters are routinely used to filter platelets or leukocytes from plasma, by adjusting pore size. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the pore sizes of membranes in a multi-layered thin film membrane in order to block or permit passage of selected elements. See MPEP 2144.05(II)(A,B). Also see in re Boesch and Slaney, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. Regarding claim 7, Bomberger '809 in view of Bomberger '776 discloses the invention as substantially claimed, see above. However, Bomberger '809 in view of Bomberger '776 lacks a multi-layer of thin film membranes interposing a first film between second and third films as claimed [claim 7].

Matkovich discloses second and third films as discussed for claim 6 above. Matkovich discloses a second film as a "prefilter" (column 7, lines 54-58). Therefore, it is the Examiner's position that adding the limitations of second and third filters as taught by Matkovich would place the first film as taught by Bomberger between second and third filters of Matkovich.

To clarify, this rejection is made by modifying the invention of Bomberger '809 in view of Bomberger '776 with the prefilter and hydrophilic nylon membrane of Matkovich. HFC 18 of Bomberger '776 is modified by arranging the "prefilter" of Matkovich ahead of HFC 18 of Bomberger '776 and hydrophilic nylon membrane of Matkovich as shown in the following table. Matkovich suggests this arrangement by referring to the film membrane as a "prefilter."

Second film membrane	"prefilter" of Matkovich
First film membrane	HFC 18 of Bomberger '809
Third film membrane	hydrophilic nylon membrane of Matkovich

Matkovich provides the advantage of removing particulate matter and microorganisms from a lipid-containing liquid as discussed for claim 6 above. These materials may clog a lipid-filtering layer as taught by Bomberger '809; therefore Matkovich also provides the advantage of allowing a lipid-filtering layer to only remove lipids. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 in view of Bomberger '776 as discussed by interposing the first film as taught by Bomberger '809 between second and third films of Matkovich in order to promote effectiveness of a lipid-filtering layer.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger '809 et al. (US 20030150809) in view of Bomberger '776 et al. (US 20060000776) in view of Matkovich et al. (US 5252222), further in view of Foltz et al. (US 5401466).

14. Regarding claim 8, Bomberger '809 in view of Bomberger '776 in view of Matkovich discloses the invention as substantially claimed, see above. However, Bomberger '809 in view of Bomberger '776 in view of Matkovich lacks silicon oxide pellets as claimed [claim 8]. Foltz discloses a separation device for lipids (column 3, lines 27-34), comprising a lipid absorptive material comprising silicon oxide pellets

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(column 6, lines 25-44, especially lines 32-36). Foltz provides the advantage of removing very low density lipoproteins (VLDL) from blood (col. 3, lines 34-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 in view of Bomberger '776 in view of Matkovich as discussed with the silicon oxide pellets as taught by Foltz in order to remove VLDL from blood.

15. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger '809 et al. (US 20030150809) in view of Cham (US 4895558), further in view of Jacobsen (US 5141493) in view of Papillon; Jean et al. (US 5348533).

16. Regarding claim 9, Bomberger '809 discloses an in-vitro blood plasma lipids filtering device comprising:

a blood collecting device, adapted to collect blood from a patient (§ [0108], Fig. 2, source 28, which may be an apheresis system. Examiner notes that an apheresis system collects blood from a patient.);

a blood separating device that separates the blood plasma from the blood collected by the blood collecting device by centrifugal separation (§ [0093], [0114] and Fig. 2, centrifuge 86 separating blood plasma);

a blood lipids filtering device that receives and filters the blood plasma (§ [0101]-[0102] and Fig. 3, HFC 18);

a blood plasma feedback device (§ [0093] and Fig. 1, blood cells returned to patient);

which is connected via tubes to a peristaltic pump (¶ [0108] and Fig. 2, peristaltic pump 30); and

pressure and temperature control devices being installed among the tubes (¶ [0115] and Fig. 2, sensors 96 controlling temperature and pressure);

Bomberger '809 discloses the invention substantially as claimed, see above. However, Bomberger '809 lacks pre- and post-filtered blood plasma bags, a saline solution treatment bag, a waste saline solution bag and an automatic weight/volume detection device as claimed [claim 9]. Cham discloses:

a saline solution treatment bag (column 8, lines 40-44 and Fig. 6, replacement fluid solution container), and

a waste saline solution bag (column 8, lines 8-18 and Fig. 6, waste bag),

Cham provides the advantage of storing waste fluid for later disposal or analysis, and replacing fluid lost to a filtering process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 as discussed with the saline solution treatment bag and waste saline solution bag as taught by Cham in order to store waste fluid and replace lost fluid.

Bomberger '809 in view of Cham discloses the invention as substantially claimed, see above. However, Bomberger '809 in view of Cham lacks pre- and post-filtered blood plasma bags and an automatic weight/volume detection device as claimed [claim 9].

Jacobsen discloses a blood filtering system comprising a filter and peristaltic pumps, the system further comprising:

a pre-filtered blood plasma container (column 3, lines 21-34 and Fig. 1A, bubble trap 20; Examiner notes that providing a bag in place of a rigid container is commonly practiced in the art), and

a post-filtered blood plasma bag (column 3, lines 43-54 and Fig. 1A, 3-liter bag 48).

It is the Examiner's position that motivation exists to connect the saline solution treatment bag (Cham, replacement fluid solution container) to an outlet of the pre-filtered blood plasma container (Jacobsen, bubble trap 20) in order to pass fluid through a dialyzer for purification as depicted in Fig. 1A of Jacobsen. Also, motivation exists to connect the waste saline solution bag (Cham, waste bag) to an entrance of the post-filtered blood plasma bag (Jacobsen, 3-liter bag 48) for the advantage of maintaining a measurement of diasylate (column 5, lines 9-13 and Fig. 1A, load sensor 52).

Bomberger '809 in view of Cham in view of Jacobsen discloses the invention as substantially claimed, see above. However, Bomberger '809 in view of Cham in view of Jacobsen an automatic weight/volume detection device as claimed [claim 9]. Papillon discloses a blood processing system (col. 1, lines 7-10, col. 3, lines 22-29), containing a centrifuge (col. 3-4, lines 65-9, Fig. 1, centrifuge 40 having stationary part 12 and bowl 10), further comprising an automatic weight/volume detection device for transmitting a signal that triggers a stop response to the blood separating device and the blood collecting device when the blood plasma bag is full (col. 4, lines 29-33, Fig. 1, digital weighed W2 providing signal to processor 20). Papillon provides the advantage of

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automating a separation procedure and preventing a container from becoming backed-up or overly full. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bomberger '809 in view of Cham in view of Jacobsen as discussed with the automatic weight/volume detection device as taught by Papillon in order to automate treatment and prevent back-up.

17. Regarding claims 11, 14 and 16, Bomberger '809 discloses the claimed limitations as discussed for claims 2, 4 and 5 above, respectively.

18. Regarding claim 12, Bomberger '809 discloses a pressure control device that indicates a current pressure value inside the tube. (¶ [0115] and Fig. 2, sensors 96 monitoring pressure). The limitation of indicating a current pressure is interpreted broadly to include the continual monitoring of pressure by sensors 96.

19. Regarding claim 13, Bomberger discloses an in-vitro blood plasma lipids filtering device wherein blood plasma passes to the screening procedure at a speed of 20-30 milliliters per minute (¶ [0124], plasma flow rate between about 10-60 mL per minute).

20. Regarding claim 15, Bomberger discloses an in-vitro blood plasma lipids filtering device wherein a temperature control device is installed in the screening procedure (¶ [0115], sensors 96 for monitoring temperature). Regarding the limitation of maintaining a constant temperature of blood plasma, Examiner takes Official Notice that physiologic fluids, especially those derived from blood, are commonly controlled at a constant temperature. In other words, reagents are commonly maintained at constant physiologic temperatures during treatment to approximate physiologic conditions.

21. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger '809 et al. (US 20030150809) in view of Cham (US 4895558), further in view of Jacobsen (US 5141493) in view of Papillon; Jean et al. (US 5348533), further in view of Matkovich et al. (US 5252222).

22. Regarding claims 17 and 18, Bomberger '809 in view of Cham in view of Jacobsen in view of Papillon discloses the invention substantially as claimed, see above. However, Bomberger '809 in view of Cham in view of Jacobsen in view of Papillon lacks multi-layers of thin film membranes as claimed [claims 17 and 18]. Matkovich discloses multi-layers of thin film membranes as discussed for claims 17 and 18 above. Regarding rationale and motivation, see discussion of claims 17 and 18 above.

23. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bomberger '809 et al. (US 20030150809) in view of Cham (US 4895558), further in view of Jacobsen (US 5141493) in view of Papillon; Jean et al. (US 5348533) in view of Matkovich et al. (US 5252222), further in view of Foltz et al. (US 5401466).

24. Regarding claim 19, Bomberger '809 in view of Cham in view of Jacobsen in view of Papillon in view of Matkovich discloses the invention as substantially claimed, see above. However, Bomberger '809 in view of Cham in view of Jacobsen in view of Papillon in view of Matkovich lacks silicon oxide pellets as claimed [claim 19]. Foltz discloses silicon oxide pellets as discussed for claim 8 above. Regarding rationale and motivation, see discussion of claim 8 above.

***Response to Amendment***

25. Examiner acknowledges amendments to the specification in view of typing errors. The limitation of a filtering device is supported in the originally filed specification, ¶ [0010], [0014].

26. Examiner notes a reference error in the Office Action dated 28 April 2008, where Foltz was incorrectly referred to as Matkovich in rejections of claims 19 and 8; (¶ 17, 28). The present Office Action corrects this error.

***Response to Arguments***

27. Applicant's arguments, see p. 10-19 filed 25 July 2008 with respect to the rejection(s) of claim(s) 1-9 and 11-19 under 35 USC § 103 over Bomberger '809 in view of Cham, Jacobsen, Matkovich and Foltz have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 USC § 103 over Bomberger '809 in view of Bomberger '776, Matkovich and Foltz.

28. Applicant asserts that Bomberger '809 lacks a pre-filtered blood plasma bag as amended. Examiner notes that Bomberger '776 teaches a pre-filtered blood plasma bag and a step of flushing with saline in the new grounds of rejection.

29. Applicant contends that Bomberger '809 lacks multi-layers of thin film membranes as claimed [claims 6, 7, 17 and 18]. Examiner notes that Matkovich teaches multi-layered thin film membranes.



30. Applicant reasons that pore size differences set the present invention apart from Bomberger '809 and Matkovich, since they lack pore sizes of about 0.3 microns or 0.2 microns. Examiner notes that pore size is interpreted as a result-effective variable, subject to experimentation and testing.

31. Applicant asserts that Bomberger '809 and Matkovich lack a first film of a multi-layered thin film membrane interposed between second and third films in addition to a number of membrane layers being placed therebetween. Examiner notes that the limitation of a number of membrane layers being placed between second and third films does not appear in the claims.

32. Applicant contends that Bomberger and Matkovich do not disclose the specific material type used by the present invention. Examiner notes that the claims only call for a first film comprising a lipid absorptive material and a third film comprising nylon. Bomberger '809 discloses hollow fibers that are substantially lipid absorptive, and Matkovich discloses a third film membrane comprising nylon. See discussion of claim 6 above.

### ***Conclusion***

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- ◆ Bomberger, David C. et al.      US 20050133450
- ◆ Bischof; Daniel F.              US 6872307
- ◆ Bischof; Daniel F.              US 6361692

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- ◆ Bischof; Daniel F. US 5865785
- ◆ Boos; Karl-Siegfried et al. US 5679260
- ◆ Seidel; Dietrich et al. US 4908354

34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam Marcetich whose telephone number is (571)272-2590. The examiner can normally be reached on 8:00am to 4:00pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Adam Marcetich/  
Examiner, Art Unit 3761

/Leslie R. Deak/  
Primary Examiner, Art Unit 3761  
3 December 2008